

For Reviewer:

This Draft is to ensure the U.S. Virgin Islands are consistent with current requirements of FEMA and the National Flood Insurance Program, met local jurisdictional needs including consistency with the land development codes, and be properly coordinated with the Virgin Islands Building Codes.

VIRR Subchapter 401 (b) (15)

Title 3 Executive Chapter 22 Department of Planning and Natural Resources Subchapter 401 (b) (15) Flood Damage Prevention

401 (b) (15) - 1. Title; authority; scope; purposes

(a) Title. These regulations, in combination with the flood provisions of the Virgin Islands Building Code (hereinafter “building code”), shall be known as the *Floodplain Management Regulations* of U.S. Virgin Islands (hereinafter “these regulations”).

(b) Authority. The Legislature of the Virgin Islands, in Title 3 Executive, Chapter 22 Department of Planning and Natural Resources, Section 401 Powers and duties of the Department, Paragraph (b) (15) empowers the Department to perform such functions as may be required by federal law in order to participate in federally-aided projects or programs and serve as the state agency of the Government of the U.S. Virgin Islands for participation in all programs of the United States Government relating to its authorized fields of activity.

(c) Scope. These regulations, in combination with the flood provisions of the building code shall apply to all proposed development in flood hazard areas established in Section 3(b). Pursuant to the requirements of federal regulation for participation in the National Flood Insurance Program (44 C.F.R. Sections 59 and 60), the provisions of these regulations shall apply to buildings exempt from the building code.

(d) Purposes and objectives. The purposes and objectives of these regulations and the flood load and flood resistant construction requirements of the building code are to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific flood hazard areas through the establishment of comprehensive regulations for management of flood hazard areas, designed to:

- (1) Minimize unnecessary disruption of commerce, access and public service during times of flooding.
- (2) Manage the alteration of natural floodplains, stream channels and shorelines to minimize the impact of development on the natural and beneficial functions of the floodplain;
- (3) Manage filling, grading, dredging, mining, paving, excavation, drilling operations, storage of equipment and materials, and other development which may increase flood damage or erosion potential.

- (4) Prevent or regulate the construction of flood barriers which will divert floodwater or increase flood hazards.
- (5) Contribute to improved construction techniques in the floodplain.
- (6) Minimize damage to public and private facilities and utilities.
- (7) Help maintain a stable tax base by providing for the sound use and development of flood hazard areas.
- (8) Minimize the need for rescue and relief efforts associated with flooding.
- (9) Ensure that property owners, occupants, and potential owners are aware of property located in flood hazard areas.
- (10) Minimize the need for future expenditure of public funds for flood control projects and response to and recovery from flood events.
- (11) Meet the requirements of the National Flood Insurance Program for community participation set forth in Title 44 Code of Federal Regulations, Section 59.22.

(e) Coordination with building code. Title 29 Virgin Islands Code, Chapter 5 Building Code, adopts the Virgin Islands Building Code and directs the Commissioner of the Department of Planning and Natural Resources to administer and enforce the building code. The Virgin Islands Building Code includes certain provisions that apply to the design and construction of buildings and structures in flood hazard areas. Therefore, these regulations are intended to be administered and enforced in conjunction with the building code.

(f) Warning. The degree of flood protection required by these regulations and the building code is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur. Flood heights may be increased by man-made or natural causes. Enforcement of these regulations and the building code does not imply that land outside the special flood hazard areas, or that uses permitted within such flood hazard areas, will be free from flooding or flood damage.

(g) Disclaimer of liability. These regulations shall not create liability on the part of the U.S. Virgin Islands, any officer, or employee charged with the enforcement of these regulations, while acting for the Territory in good faith and without malice in the discharge of the duties required by these regulations or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of these regulations shall be defended by legal representative of the Territory until the final termination of the proceedings. The Commissioner of the Department of Planning and Natural Resources and any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of these regulations.

(h) Other laws. The provisions of these regulations shall not be deemed to nullify any provisions of Territory or federal law.

(i) Abrogation and greater restrictions. These regulations supersede any ordinance in effect in flood hazard areas. However, these regulations are not intended to repeal, abrogate, or impair any existing ordinances including land development regulations, subdivision regulations, zoning ordinances, stormwater management regulations, or building code. In the event of an overlap or conflict between these regulations and any other ordinance, code, or regulation, the more restrictive shall govern.

(j) Severability. If any section, subsection, sentence, clause or phrase of these regulations is, for any reason, declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the regulations as a whole, or any part thereof, other than the part so declared.

401 (b) (15) - 2. Definitions

For the purposes of these Rules, the following words and terms shall have the meanings shown herein. Other terms are defined in the building code and ASCE 24. Where terms are not defined, such terms shall have ordinarily accepted meanings such as the context implies.

Accessory Structure means a structure on the same parcel of property as a principal structure, the use of which for parking or storage is incidental to the use of the principal structure.

Advisory Flood Hazard Resources Map means maps of U.S. Virgin Islands created by FEMA in response to Hurricanes Maria and Irma, dated April 26, 2018 and accessible by contacting the Division of Building Permits, Department of Planning and Natural Resources.

Agricultural Structure means a walled and roofed structure used exclusively for agricultural purposes or uses in connection with the production, harvesting, storage, raising, or drying of agricultural commodities and livestock, including aquatic organisms. Structures that house tools or equipment used in connection with these purposes or uses are also considered to have agricultural purposes or uses.

Alteration of a watercourse means a dam, impoundment, channel relocation, change in channel alignment, channelization, or change in cross-sectional area of the channel or the channel capacity, or any other form of modification which may alter, impede, retard or change the direction and/or velocity of the riverine flow of water during conditions of the base flood.

ASCE 24 means the standard *Flood Resistant Design and Construction*, referenced by the building code, developed and published by the American Society of Civil Engineers, Reston, VA. Where cited, ASCE 24 refers to the edition of the standard that is referenced by the building code.

Base flood means the flood having a 1-percent chance of being equaled or exceeded in any given year. [Also defined in VIBC.]

Base flood elevation means the elevation of the base flood, including wave height, relative to the Virgin Island Vertical Datum of 2009 (VIDV 09), National Geodetic Vertical Datum of 1929

(NGVD 29), North American Vertical Datum of 1988 (NAVD 88) or other datum specified on the Flood Insurance Rate Map (FIRM). The base flood elevation shall be the higher of the base flood elevation determined by the Flood Insurance Study, the Flood Insurance Rate Map, or the Advisory Base Flood Elevations shown on the U.S. Virgin Islands Advisory Flood Hazard Resources Map.

Basement means any area of a building having its floor subgrade (below ground level) on all sides.

Building code means the current effective Virgin Islands Building Code, Title 29 Virgin Islands Code, Chapter 5.

Cistern means a facility used to store water that is part of the water supply system for a building.

Coastal high hazard area means the area within the special flood hazard area extending from offshore to the inland limit of a primary dune along an open coast and any other area that is subject to high-velocity wave action from storms or seismic sources, and shown on a Flood Insurance Rate Map (FIRM) or other flood hazard map as velocity Zone V, VO, VE or V1-30. [Also defined in VIBC.]

Design flood means the flood associated with the greater of the following two areas: [Also defined in VIBC.]

- (1) Area with a flood plain subject to a 1-percent or greater chance of flooding in any year.
- (2) Area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.

Design flood elevation means the elevation of the "design flood," including wave height, relative to the datum specified on the legally designated flood hazard map. In areas designated as Zone AO, the design flood elevation shall be the elevation of the highest existing grade of the building's perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where a depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet (610 mm). [Also defined in VIBC.]

Development means any manmade change to improved or unimproved real estate, including but not limited to, buildings or other structures, tanks, temporary structures, temporary or permanent storage of materials, mining, dredging, filling, grading, paving, excavations, drilling operations and other land-disturbing activities.

Encroachment means the placement of fill, excavation, buildings, permanent structures or other development into a flood hazard area which may impede or alter the flow capacity of riverine flood hazard areas.

Flood damage-resistant materials means any construction material capable of withstanding direct and prolonged contact with floodwaters without sustaining any damage that requires more than cosmetic repair. [Also defined in VIBC.]

Flood hazard area means the greater of the following two areas: [Also defined in VIBC.]

- (1) The area within a floodplain subject to a 1-percent or greater chance of flooding in any year.
- (2) The area designated as a flood hazard area on the community's flood hazard map, or otherwise legally designated.

Flood Insurance Rate Map (FIRM) means an official map of a community on which the Federal Emergency Management Agency (FEMA) has delineated both the special flood hazard areas and the risk premium zones applicable to the community. [Also defined in VIBC.]

Flood Insurance Study means the official report provided by the Federal Emergency Management Agency containing the Flood Insurance Rate Map (FIRM), the Flood Boundary and Floodway Map (FBFM), the water surface elevation of the base flood and supporting technical data. [Also defined in VIBC.]

Floodplain Administrator means the Commissioner of the Department of Planning and Natural Resources.

Floodway means the channel of the river, creek or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot. [Also defined in VIBC.]

Flood zone permit means an official document or certificate issued by the Department of Planning and Natural Resources which authorizes performance of specific development activities that are located in flood hazard areas and that are deemed to be compliant with these regulations.

Functionally dependent use means a use that cannot perform its intended purpose unless it is located or carried out in close proximity to water, including only docking facilities, port facilities necessary for the loading or unloading of cargo or passengers, and shipbuilding and ship repair facilities. The term does not include long-term storage or related manufacturing facilities.

Highest adjacent grade means the highest natural elevation of the ground surface prior to construction next to the proposed walls or foundation of a structure.

Historic structure means any structure that is:

- (1) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (2) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district; or
- (3) Individually listed on the Virgin Islands Registry of Historic Buildings, Sites, and Places maintained by the Virgin Islands State Historic Preservation Office.

Letter of Map Change (LOMC) means an official determination issued by FEMA that amends or revises an effective Flood Insurance Rate Map or Flood Insurance Study. Letters of Map Change include:

- (1) Letter of Map Amendment (LOMA): An amendment based on technical data showing that a property was incorrectly included in a designated special flood hazard area. A LOMA amends the current effective Flood Insurance Rate Map (FIRM) and establishes that a specific property, portion of a property, or structure is not located in a special flood hazard area.
- (2) Letter of Map Revision (LOMR): A revision to the current effective FIRM based on technical data that may show changes to flood zones, flood elevations, special flood hazard area boundaries and floodway delineations, and other planimetric features.
- (3) Letter of Map Revision Based on Fill (LOMR-F): A determination that a structure or parcel of land has been elevated by fill above the base flood elevation and is, therefore, no longer located within the special flood hazard area. In order to qualify for this determination, the fill must have been permitted and placed in accordance with the community's floodplain management regulations.
- (4) Conditional Letter of Map Revision (CLOMR): A formal review and comment as to whether a proposed flood protection project or other project complies with the minimum NFIP requirements for such projects with respect to delineation of special flood hazard areas. A CLOMR does not revise the effective Flood Insurance Rate Map or Flood Insurance Study; upon submission and approval of certified as-built documentation, a Letter of Map Revision may be issued by FEMA to revise the effective FIRM.

Lowest floor means the lowest floor of the lowest enclosed area, including basement, but excluding any unfinished or flood-resistant enclosure, usable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the structure in violation of the non-elevation requirements of the building code and these regulations. [Also defined in VIBC.]

Manufactured home means a structure that is transportable in one or more sections, eight (8) feet or more in width and greater than four hundred (400) square feet, built on a permanent chassis, designed for use with or without a permanent foundation when connected to the required utilities, and constructed to the Manufactured Home Construction and Safety Standards and rules and regulations promulgated by the U.S. Department of Housing and Urban Development. The term also includes mobile homes, recreational vehicles, park trailers, travel trailers and similar transportable structures that are placed on a site for 180 consecutive days or longer.

Mangrove stand means an assemblage of mangrove trees which are mostly low trees noted for a copious development of interlacing adventitious roots above the ground and which contain one or more of the following species: black mangrove (*Avicennia Nitida*); red mangrove (*Rhizophora Mangle*); white mangrove (*Languncularia Racemosa*); and button wood (*Conocarpus Erecta*).

Market value means the price at which a property will change hands between a willing buyer and a willing seller, neither party being under compulsion to buy or sell and both having reasonable knowledge of relevant facts. As used in these regulations, the term refers to the market value of buildings and structures, excluding the land and other improvements on the parcel. Market value

may be established by one of the following methods: (1) Actual Cash Value (replacement cost depreciated for age and quality of construction) or (2) tax assessment value adjusted to approximate market value by a factor provided by the Office of the Tax Assessor.

Recreational vehicle means a vehicle that is built on a single chassis, 400 square feet (37.16 m²) or less when measured at the largest horizontal projection, designed to be self-propelled or permanently towable by a light-duty truck, and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices and has no permanently attached additions.

Sand dunes mean naturally occurring accumulations of sand in ridges or mounds landward of the beach.

Special flood hazard area (SFHA) means the land area subject to flood hazards and shown on a Flood Insurance Rate Map or other flood hazard map as Zone A, AE, A1-30, A99, AR, AO, AH, V, VO, VE, or V1-30. [Also defined in VIBC.]

Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. [Also defined in VIBC.]

Substantial improvement means any repair, reconstruction, rehabilitation, alteration, addition or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. When the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the actual repair work performed. The term does not, however, include either: [Also defined in VIBC.]

- (1) Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions.
- (2) Any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

Variance means a grant of relief from the requirements of these regulations which permit construction in a manner otherwise prohibited by this section where specific enforcement would result in unnecessary hardship.

Violation means a development that is not fully compliant with these regulations or the flood provisions of the building code, as applicable.

Watercourse means a river, creek, stream, channel, ghut/gut, or other topographic feature in, on, through, or over which water flows at least periodically.

401 (b) (15) - 3. Applicability

(a) General applicability. These regulations, in conjunction with the building code, provide minimum requirements for development located in flood hazard areas, including the subdivision of land; filling; grading; site improvements installation of utilities; placement, installation, and replacement of manufactured homes; placement of recreational vehicles; installation of tanks; temporary structures and temporary or permanent storage; and certain building work exempt from permit under the building code; owner-occupied dwellings in rural areas with a floor area of less than 600 square feet; and other buildings and development activities.

(b) Establishment of Flood Hazard Areas. The U.S. Virgin Islands was accepted for participation in the National Flood Insurance Program on October 15, 1980. The Flood Insurance Study for the U.S. Virgin Islands dated April 16, 2007, and all subsequent amendments and revisions, and the accompanying Flood Insurance Rate Maps (FIRM), and all subsequent amendments and revisions to such maps, and the Advisory Flood Hazard Resources Maps created by FEMA on April 26, 2018, are hereby adopted by reference and serve as the basis for establishing flood hazard areas. Where the building code establishes flood hazard areas, such areas are established by this section. Maps and studies that establish flood hazard areas are on file at the Department of Planning and Natural Resources.

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401 (b) (15) - 4. Duties and powers of the Floodplain Administrator

(a) Designation. The Commissioner of the Department of Planning and Natural Resources is designated the Floodplain Administrator. The Floodplain Administrator shall have the authority to delegate performance of certain duties to other employees and may request the assistance of other departments and agencies of the Government to provide technical assistance, as needed.

(b) General authority. The Floodplain Administrator is authorized and directed to administer and enforce the provisions of these regulations. The Floodplain Administrator shall have the authority to render interpretations of these regulations consistent with the intent and purpose of these regulations and to establish policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall:

- (1) Be consistent with the intent and purpose of these regulations and the flood provisions of the building code.
- (2) Be liberally construed in favor of the Territory.
- (3) Not have the effect of waiving specific requirements without the granting of a variance pursuant to Section 8.

(4) Neither limit nor repeal any other powers granted under Territory statutes.

(c) Coordination. The Floodplain Administrator shall coordinate with the Building Official to administer and enforce the flood provisions of the building code.

(d) Duties. The duties of the Floodplain Administrator shall include but are not limited to:

- (1) Review all permit applications and plans to determine whether proposed development is located in flood hazard areas.
- (2) Review all applications and plans for development in flood hazard areas for compliance with the provisions of these regulations.
- (3) Require development in flood hazard areas to be reasonably safe from flooding and to be designed and constructed with methods, practices and materials that minimize flood damage in accordance with these regulations.
- (4) Interpret flood hazard area boundaries and provide available flood elevation and flood hazard information.
- (5) Determine whether additional flood hazard data shall be obtained from other sources or developed by the applicant.
- (6) Advise applications for new buildings and structures, including substantial improvement, that are located in any unit of the Coastal Barrier Resource System established by the Coastal Barrier Resources Act (Pub. L. 97-348) and the Coastal Barrier Improvement Act of 1990 (Pub. L. 101-591) that federal flood insurance is not available on such construction. Coastal Barrier Resource System boundaries are maintained by U.S. Fish and Wildlife Service and are available through the FEMA National Flood Hazard Layer Viewer.
- (7) Review required certifications and documentation specified by these regulations and the building code to determine that such certifications and documentations are complete. Deficient certifications shall be returned to the Building Official for correction by the applicant or permit holder.
- (8) Establish, in coordination with the Building Official, written procedures for administering and documenting determinations of substantial improvement and substantial damage made pursuant to Subsection (f) of this section.
- (9) Coordinate with the Building Official and others to identify and investigate damaged buildings located in flood hazard areas and inform owners of the requirement to obtain permits for repairs.
- (10) Review requests submitted to the Building Official seeking approval to modify the strict application of the flood load and flood resistant construction requirements of the building code, to determine whether such requests require consideration as a variance pursuant to Section 8.
- (11) Require applicants who submit hydrologic and hydraulic engineering analyses to support permit applications to submit to FEMA the data and information necessary to maintain the Flood Insurance Rate Maps when the analyses indicate changes in base

flood elevations, flood hazard area boundaries, or floodway designations; such submissions shall be made within 6 months of such data becoming available.

- (12) Require applicants who propose alteration of a watercourse to notify the Federal Emergency Management Agency (FEMA).
- (13) Inspect development in accordance with Section 7 and inspect flood hazard areas to determine when development is undertaken without issuance of flood zone permits.
- (14) Prepare comments and recommendations for consideration when applicants seek variances in accordance with Section 8.
- (15) Cite violations in accordance with Section 9.

(e) Use of changed technical data. The Floodplain Administrator and the applicant shall not use changed flood hazard area boundaries or base flood elevations for proposed buildings or developments unless the Floodplain Administrator or applicant has applied for a conditional Flood Insurance Rate Map (FIRM) revision and has received the approval of the Federal Emergency Management Agency.

(f) Substantial improvement and substantial damage determinations. For applications for building permits to improve buildings and structures, including alterations, movement, repair, additions, enlargement, rehabilitations, renovations, substantial improvements, repairs of substantial damage, and any other improvement of or work on such buildings and structures, the Floodplain Administrator, in coordination with the Building Official, shall:

- (1) Estimate the market value, or require the applicant to obtain an estimate of the actual cash value (depreciated) prepared by a qualified independent appraiser of the building or structure before the start of construction of the proposed work; in the case of repair, the market value of the building or structure shall be the market value before the damage occurred and before any repairs are made.
- (2) Compare the cost to perform the improvement, the cost to repair the damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, when applicable, to the market value of the building or structure.
- (3) Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage.
- (4) Notify the applicant when it is determined that the work constitutes substantial improvement or repair of substantial damage and that compliance with the flood resistant construction requirements of the building code is required and notify the applicant when it is determined that work does not constitute substantial improvement or repair of substantial damage.

(g) Department records. In addition to the requirements of the building code and these regulations, and regardless of any limitation on the period required for retention of public records, the Floodplain Administrator shall maintain and permanently keep and make available for public inspection all records that are necessary for the administration of these regulations and the flood provisions of the building code, including Flood Insurance Studies, Flood Insurance Rate Maps, and Advisory Flood Hazard Resources Maps; documents from FEMA that amend or

revise FIRMs; records of issuance of permits and denial of permits; determinations of whether proposed work constitutes substantial improvement or repair of substantial damage; required certifications and documentation specified by the building code and these regulations; notifications to FEMA and the Department of Planning and Natural Resources related to alterations of watercourses; assurance that the flood carrying capacity of altered waterways will be maintained; documentation related to variances, including justification for issuance or denial; and records of enforcement actions taken pursuant to these regulations and the flood resistant provisions of the building code.

401 (b) (15) - 5. Flood zone permits

(a) Permits required. Any person, owner or authorized agent who intends to conduct any development in a flood hazard area shall first make application to the Department of Planning and Natural Resources and shall obtain the required flood zone permit for floodplain development. No permit shall be issued until compliance with the requirements of these regulations and all other applicable codes and regulations has been satisfied. No building permit shall be issued based on Conditional Letters of Map Revision issued by FEMA. Depending on the nature and extent of proposed development that includes a building or structure, the Floodplain Administrator may determine that a flood zone permit or approval is required in addition to a building permit.

(b) Application for flood zone permit. The applicant shall file an application in writing on a form furnished by the Floodplain Administrator. Applications shall be filed with the district office of the Department of Planning and Natural Resources where the development will occur. The information provided shall:

- (1) Identify and describe the development to be covered by the permit.
- (2) Describe the land on which the proposed development is to be conducted by legal description, street address or similar description that will readily identify and definitely locate the site.
- (3) Indicate the use and occupancy for which the proposed development is intended.
- (4) Be accompanied by a site plan and construction documents as specified in Section 6, including grading, excavation and filling plans and other information deemed appropriate by the Floodplain Administrator.
- (5) State the valuation of the proposed work.
- (6) Include such other data and information required by the Floodplain Administrator to demonstrate compliance with these regulations.
- (7) Be signed by the applicant or the applicant's authorized agent.

(c) Validity of flood zone permit. The issuance of a flood zone permit under these regulations or the building code shall not be construed to be a permit for, or approval of, any violation of these regulations or any other regulations of the Territory. The issuance of a permit based on submitted documents and information shall not prevent the Floodplain Administrator from

requiring the correction of errors and omissions. The Floodplain Administrator is authorized to prevent occupancy or use of a structure or site which is in violation of these regulations.

(d) Other permits required. The applicant shall obtain all other required Territory and federal permits prior to initiating work authorized by these regulations and shall provide documentation of such permits to the Floodplain Administrator. Activities that affect wetlands and alter surface water flows may be subject to section 404 of the Clean Water Act.

(e) Expiration. A flood zone permit shall become invalid when the proposed development is not commenced within 180 days after its issuance, or when the work authorized is suspended or abandoned for a period of 180 days after the work commences. Extensions shall be requested in writing and justifiable cause demonstrated. The Floodplain Administrator is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each.

(f) Suspension or revocation. The Floodplain Administrator is authorized to suspend or revoke a flood zone permit issued under these regulations wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of any ordinance or code of the Territory.

401 (b) (15) - 6. Site plans and construction documents

(a) Information for development in flood hazard areas. The site plan or construction documents for any development subject to the requirements of these regulations shall be drawn to scale and shall include, as applicable to the proposed development:

- (1) Delineation of flood hazard areas, floodway boundaries and flood zone(s), base flood elevation(s), ground elevations when necessary for review of the proposed development.
- (2) Where base flood elevations or floodway data are not included on the FIRM, in the Flood Insurance Study, or on the Advisory Flood Hazard Resources Map, they shall be established in accordance with Subsection (b) of this section.
- (3) Where the parcel on which the proposed development will take place is larger than 5 acres and base flood elevations are not included on the FIRM, in the Flood Insurance Study, or on the Advisory Flood Hazard Resources Map, if the development is sited in a mapped special flood hazard area, base flood elevations shall be established in accordance with Subsection (b) (1) of this section.
- (4) Where base flood elevations are not included on the FIRM, in the Flood Insurance Study, or on the Advisory Flood Hazard Resources Map for a watercourse, a minimum distance of 25 feet from the top of the streambank on each side, or 30 feet from the centerline, whichever is greater, shall be delineated.
- (5) Location of the proposed activity and proposed structures, and locations of existing buildings and structures; in coastal high hazard areas, new buildings shall be located landward of the reach of mean high tide.
- (6) Location, extent, amount, and proposed final grades of any filling, grading, excavation, and drainage patterns; locations of water supply, sanitary sewer, and other utilities.

- (7) Where the placement of fill is proposed, the amount, type, and source of fill material; compaction specifications; a description of the intended purpose of the fill areas; and evidence that the proposed fill areas are the minimum necessary to achieve the intended purpose.
- (8) Extent of any proposed alteration of sand dunes or mangrove stands.
- (9) Existing watercourses and, if proposed, alignment of any proposed alteration of a watercourse.

The Floodplain Administrator is authorized to waive the submission of site plans, construction documents, and other data that are required by these regulations but that are not required to be prepared by a registered design professional when it is found that the nature of the proposed development is such that the review of such submissions is not necessary to ascertain compliance.

(b) Information in flood hazard areas without base flood elevations (approximate Zone A).

Where flood hazard areas are delineated on the FIRM or the Advisory Flood Hazard Resources Map and base flood elevation data have not been provided, the Floodplain Administrator is authorized to:

- (1) Require the applicant to include base flood elevation data prepared and sealed by a qualified professional engineer in accordance with currently accepted engineering practices. Studies, analyses and computations shall be submitted in sufficient detail to allow review and approval by the Floodplain Administrator. The accuracy of data submitted for such determination shall be the responsibility of the applicant.
- (2) Obtain, review, and provide to applicants base flood elevation and floodway data available from a federal or Territory agency or other source or require the applicant to obtain and use base flood elevation and floodway data available from a federal or Territory agency or other source.
- (3) Where base flood elevation and floodway data are not available from another source, where the available data are deemed by the Floodplain Administrator to not reasonably reflect flooding conditions, or where the available data are known to be scientifically or technically incorrect or otherwise inadequate:
 - (a) Require the applicant to include base flood elevation data in accordance with Subsection (b) (1) of this section; or
 - (b) Specify that the base flood elevation is two (2) feet above the highest adjacent grade at the location of the development, provided there is no evidence indicating flood depths have been or may be greater than two (2) feet.
- (4) Where the base flood elevation data are to be used to support a request for a Letter of Map Change from FEMA, advise the applicant that the analyses shall be prepared by a qualified professional engineer in a format required by FEMA, and that it shall be the responsibility of the applicant to satisfy the submittal requirements and pay the processing fees.

(c) Additional analyses and certifications. As applicable to the location and nature of the proposed development activity, and in addition to the requirements of this section, the applicant shall have the following analyses signed and sealed by a professional engineer for submission with the site plan and construction documents:

- (1) For development activities proposed to be located in a floodway, a floodway encroachment analysis that demonstrates that the encroachment of the proposed development will not cause any increase in base flood elevations; where the applicant proposes to undertake development activities that do increase base flood elevations, the applicant shall submit such analysis to FEMA as specified in Subsection (d) of this section and shall submit the Conditional Letter of Map Revision, when issued by FEMA, with the site plan and construction documents.
- (2) For development activities proposed to be located in a riverine flood hazard area where base flood elevations are included in the Flood Insurance Study or on the FIRM but floodways have not been designated, hydrologic and hydraulic analyses that demonstrate that the cumulative effect of the proposed development, when combined with all other existing and anticipated flood hazard area encroachments, will not increase the base flood elevation more than one (1) foot at any point within the Territory. This requirement does not apply in isolated flood hazard areas not connected to a riverine flood hazard area or in flood hazard areas identified as Zone AO or Zone AH.
- (3) For alteration of a watercourse, an engineering analysis prepared in accordance with standard engineering practices that demonstrates the flood-carrying capacity of the altered or relocated portion of the watercourse will not be decreased, and certification that the altered watercourse shall be maintained in a manner which preserves the channel's flood-carrying capacity. The applicant shall submit the analysis to FEMA as specified in Subsection (d) of this section.
- (4) For activities that propose to alter sand dunes or mangrove stands in coastal high hazard areas (Zone V/VE), an engineering analysis that demonstrates that the proposed alteration will not increase the potential for flood damage.

(d) Submission of additional data. When additional hydrologic, hydraulic or other engineering data, studies, and additional analyses are submitted to support an application, the applicant has the right to seek a Letter of Map Change from FEMA to change the base flood elevations, change floodway boundaries, or change boundaries of flood hazard areas shown on FIRMs, and to submit such data to FEMA for such purposes. The analyses shall be prepared by a qualified professional engineer in a format required by FEMA. Submittal requirements and processing fees shall be the responsibility of the applicant.

401 (b) (15) - 7. Inspections

(a) Inspections, in general. Development for which a flood zone permit is required shall be subject to inspection. Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of these regulations or the building code. Inspections presuming to give authority to violate or cancel the provisions of these regulations or the building code or other ordinances shall not be valid.

(b) Buildings and structures. The Building Official shall make or cause to be made, inspections for buildings and structures in flood hazard areas authorized by permit in accordance with the building codes:

- (1) Lowest floor elevation. Upon placement of the lowest floor, including the basement, and prior to further vertical construction, certification of the elevation required in the building code shall be submitted to the building official.
- (2) Final inspection. Prior to the final inspection, certification of the elevation required in the building code shall be submitted to the building official.

(c) Inspections of development other than buildings and structures. The Floodplain Administrator shall make or cause to be made, inspections of all development other than buildings and structures that is authorized by issuance of a flood zone permit in accordance with these regulations. The Floodplain Administrator shall inspect flood hazard areas from time to time to determine when development is undertaken without issuance of a permit.

(d) Manufactured homes. The Floodplain Administrator shall make or cause to be made, inspections of manufactured homes that are installed or replaced in flood hazard areas to determine compliance with the requirements of these regulations and the conditions of the issued flood zone permit. Upon installation of a manufactured home, certification of the elevation of the lowest floor shall be submitted to the Floodplain Administrator prior to the final inspection.

401 (b) (15) - 8. Variances and appeals

(a) Nature of variances. The considerations and conditions for variances set forth in this section are based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be issued for a parcel of property with physical characteristics so unusual that complying with the requirements of these regulations would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners. The issuance of a variance is for floodplain management purposes only. Federal flood insurance premium rates are determined by the National Flood Insurance Program according to actuarial risk and will not be modified by the granting of a variance.

It is the duty of the Territory to promote public health, safety and welfare and minimize losses from flooding. This duty is so compelling and the implications of property damage and the cost of insuring a structure built below flood level are so serious that variances from the elevation or other requirements in the building code should be quite rare. The long term goal of preventing and reducing flood loss and damage, and minimizing recovery costs, inconvenience, danger, and suffering, can only be met when variances are strictly limited. Therefore, the variance requirements in these regulations are detailed and contain multiple provisions that must be met before a variance can be properly issued. The criteria are designed to screen out those situations in which alternatives other than a variance are more appropriate.

(b) Variances, general. The Board of Land Use Appeals shall hear and decide requests for variances, except the Virgin Islands Historic Preservation Commission shall hear and decide requests for variances in the case of historic structures.

(c) Appeals, general. The Board of Land Use Appeals shall hear and decide on appeals when it is alleged there is an error in any requirement, decision, or determination made by the Floodplain Administrator in the interpretation, administration, and enforcement of these regulations, as provided in Title 29 Virgin Islands Code, Chapter 3 Zoning and Subdivision Law.

(d) Limitations on authority. The Virgin Islands Board of Land Use Appeals shall base its determination on technical justifications submitted by applicants, the considerations for issuance in Section (i) of this section, the conditions of issuance set forth in Subsection (j) of this section, and the comments and recommendations of the Floodplain Administrator and Building Official, as applicable, and has the right to attach such conditions to variances as it deems necessary to further the purposes and objectives of these regulations and the building code.

(e) Historic structures. A variance is authorized to be issued for the repair or rehabilitation of a historic structure upon a determination by the Virgin Islands Historic Preservation Commission that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure. When the proposed work is determined to preclude a structure's continued designation as a historic structure, a variance shall not be granted and the structure and any repair, improvement, and rehabilitation shall be subject to the requirements of the building code and these regulations.

(f) Functionally dependent uses. A variance is authorized to be issued for the construction or substantial improvement necessary for the conduct of a functionally dependent use provided the variance is the minimum necessary to allow the construction or substantial improvement, and that all due consideration has been given to use of methods and materials that minimize flood damage during the base flood and create no additional threats to public safety.

(g) Restrictions in floodways. A variance shall not be issued for any proposed development in a floodway when any increase in flood levels would result during the base flood discharge, as evidenced by the applicable analysis and certification required in Section 6, Subsection (c)(1).

(h) Agricultural structures. A variance is authorized to be issued for the construction or substantial improvement of agricultural structures provided the requirements of this section are satisfied and:

(1) A determination has been made that the proposed agricultural structure:

- (a) Is used exclusively in connection with the production, harvesting, storage, raising, or drying of agricultural commodities and livestock, or storage of tools or equipment used in connection with these purposes or uses, and will be restricted to such exclusive uses.
- (b) Has low damage potential (physical damage, contents damage, and loss of function).

- (c) Does not increase risks and pose a danger to public health, safety, and welfare if flooded and contents are released, including but not limited to the effects of flooding on manure storage, livestock confinement operations, liquified natural gas terminals, and production and storage of highly volatile, toxic, or water-reactive materials.
 - (d) Is not located in a coastal high hazard area (Zone V/VE), except for aquaculture structures dependent on close proximity to water.
 - (e) Complies with the wet floodproofing construction requirements of Paragraph (2).
- (2) The agricultural structures meet all of the following:
- (a) Anchored to resist flotation, collapse, and lateral movement.
 - (b) When enclosed by walls, walls have flood openings that comply with the flood opening requirements of ASCE 24.
 - (c) Flood damage-resistant materials are used the base flood elevation.
 - (d) Mechanical, electrical, and utility equipment are elevated above the base flood elevation.

(i) Considerations for issuance of variances. In reviewing requests for variances, all technical evaluations, all relevant factors, all other requirements of these regulations and the building code, as applicable, and the following shall be considered:

- (1) The danger that materials and debris may be swept onto other lands resulting in further injury or damage.
- (2) The danger to life and property due to flooding or erosion damage.
- (3) The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners.
- (4) The importance of the services provided by the proposed development to the community.
- (5) The availability of alternate locations for the proposed development that are not subject to flooding or erosion and the necessity of a waterfront location, where applicable.
- (6) The compatibility of the proposed development with existing and anticipated development.
- (7) The relationship of the proposed development to the comprehensive plan and floodplain management program for that area.
- (8) The safety of access to the property in times of flood for ordinary and emergency vehicles.
- (9) The expected heights, velocity, duration, rate of rise and debris and sediment transport of the floodwater and the effects of wave action, where applicable, expected at the site.
- (10) The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets and bridges.

(j) Conditions for issuance of variances. Variances shall only be issued upon:

- (1) Submission by the applicant of a showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site limit compliance with any provision of these regulations or renders the elevation standards of the building code inappropriate.
- (2) A determination that failure to grant the variance would result in exceptional hardship due to the physical characteristics of the land that render the lot undevelopable.
- (3) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public or future property owners, or conflict with existing Territory laws or ordinances.
- (4) A determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
- (5) When the request is to allow construction of the lowest floor of a new building or substantial improvement of a building below the base flood elevation, notification to the applicant in writing over the signature of the Floodplain Administrator specifying the difference between the base flood elevation and the proposed elevation of the lowest floor, stating that the issuance of a variance will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and that such construction below the base flood level increases risks to life and property.

401 (b) (15) - 9. Violations

(a) Violations. Any development in any flood hazard area that is being performed without an issued flood zone permit or that is in conflict with an issued permit shall be deemed a violation. A building or structure without the documentation of the elevation of the lowest floor, other required design certifications, or other evidence of compliance required by the building code is presumed to be a violation until such time as that documentation is provided.

(b) Authority. The Floodplain Administrator is authorized to serve notices of violation or stop work orders to owners of property involved, to the owner's agent, or to the person or persons doing the work for development that is not within the scope of the building code, but is regulated by these regulations and that is determined to be a violation.

(c) Penalties.

- (1) Any person who violates any provision of these regulations, or any order issued hereunder, shall be subject to a civil fine not to exceed one thousand (\$1,000.00) dollars per day of violation. After a public hearing the violator may also be required to remove or correct the condition caused by the violation and may further be ordered to demolish or otherwise remove the subject building(s) or development, and in addition, shall pay all costs and expenses involved in the proceedings.
- (2) Any violation of these regulations or order Issued hereunder shall constitute a misdemeanor. Each day such violation continues shall be considered a separate violation.

Any person convicted of such a violation shall be fined in accordance with the provisions of paragraph (1) hereinabove, or imprisoned not more than one year, or both.

- (3) In addition to any other penalties provided by law, any person who intentionally and knowingly performs any development in violation of these rules and regulations shall be subject to a civil fine of not less than five hundred (\$500.00) dollars nor more than one thousand (\$1,000.00) dollars per day for each day during which such violation occurs.
- (4) In addition to the foregoing, and in order to deter further violations of the provisions of these rules and regulations, the Attorney General, or the Commissioner, may maintain an action for exemplary damages, the amount of which is left to the discretion of the Court, against any person who has intentionally and knowingly violated any provisions of these rules and regulations.

401 (b) (15) - 10. Buildings and structures

(a) Requirements for buildings and structures in flood hazard areas. Buildings and structures within the scope of the building code that are proposed in flood hazard areas shall comply with the applicable requirements of the building code. Site improvements including filling and grading associated with buildings and structures are subject to the applicable requirements of these regulations.

(b) Detached garages and accessory structures. Detached garages and accessory storage structures used only for parking or storage are permitted below the base flood elevation provided the garages and accessory storage structures meet all of the following:

- (1) Are not larger than a one-story two-car garage when located in special flood hazard areas (Zone A/AE) other than coastal high hazard areas (Zone V/VE).
- (2) Are not larger than 100 sq. ft. in area when located in coastal high hazard areas (Zone V/VE).
- (3) Are anchored to resist flotation, collapse or lateral movement resulting from flood loads.
- (4) Have flood openings in accordance with ASCE 24.
- (5) Have flood damage-resistant materials used below the base flood elevation.
- (6) Have mechanical, plumbing and electrical systems, including plumbing fixtures, elevated to or above the base flood elevation.

(c) Certain dwellings exempt from the building code. If located in flood hazard areas, owner-occupied dwellings in rural areas with a floor area of less than 600 square feet that are exempt from the building code shall comply with the requirements of ASCE 24.

401 (b) (15) - 11. Subdivisions

(a) Subdivisions; minimum requirements. Any subdivision proposal or other proposed new development in a flood hazard area shall be reviewed to assure that:

- (1) Such proposals are consistent with the need to minimize flood damage and will be reasonably safe from flooding.

- (2) Adequate drainage is provided to reduce exposure to flood hazards; in Zones AH and AO, adequate drainage paths shall be provided to guide floodwater around and away from structures.

(b) Subdivision requirements. Where any portion of proposed subdivisions lies within a flood hazard area, the following shall be required:

- (1) The flood hazard areas, including floodways, coastal high hazard areas, and base flood elevations, as appropriate, shall be delineated on tentative subdivision plots.
- (2) Where a proposed subdivision has more than 50 lots or is larger than 5 acres and base flood elevations are not included on the FIRM or the Advisory Flood Hazard Resources Map, the base flood elevations are determined in accordance with Section 6, Subsection (b)(1).
- (3) Residential building lots shall be provided with adequate buildable area outside the floodway.
- (4) All public utilities and facilities in flood hazard areas, such as sewer, gas, electric and water systems are located and constructed to minimize or eliminate flood damage in accordance with Section 12, as applicable.
- (5) When fill will be placed to support buildings, the fill shall be placed in accordance with the building code and approval of the subdivision shall require submission of certification of as-built elevations for each filled pad; such certification shall be prepared and sealed by a USVI-licensed land surveyor or a USVI-licensed professional engineer (civil).

401 (b) (15) - 12. Site development

(a) Development; minimum requirements. All proposed development in flood hazard areas shall be reviewed to determine that:

- (1) Such proposals are consistent with the need to minimize flood damage and will be reasonably safe from flooding.
- (2) Where the proposed development is larger than 5 acres and base flood elevations are not included on the FIRM or the Advisory Flood Hazard Resources Map, the base flood elevations are determined in accordance with Section 6, Subsection (b)(1).
- (3) Adequate drainage is provided to reduce exposure to flood hazards; in Zones AH and AO, adequate drainage paths shall be provided to guide floodwater around and away from proposed structures.

(b) Development in floodways. Development, site improvements, land disturbing activity, and encroachments in floodways shall not be authorized unless it has been demonstrated through hydrologic and hydraulic analyses required in accordance with Section 6, Subsection (c)(1), that the proposed encroachment will not result in any increase in the base flood level during occurrence of the base flood discharge.

(c) Development adjacent to certain watercourses. Where base flood elevations are not included on the FIRM, in the Flood Insurance Study, or on the Advisory Flood Hazard

Resources Map, for a watercourse, no encroachments, including fill material and structures, shall be located within a minimum distance of 25 feet from the top of the streambank on each side, or 30 feet from the centerline, whichever is greater, unless a hydrologic and hydraulic analysis prepared by a USVI-licensed professional engineer that the proposed encroachments do not result in any increase in flood levels during occurrence of the base flood discharge. The Commissioner of the Department Planning and Natural Resources has the authority to establish wider encroachment limits where site conditions warrant.

(d) Coastal high hazard areas (Zone V/VE). In coastal high hazard areas:

- (1) New buildings shall only be authorized landward of the reach of mean high tide.
- (2) The use of fill for structural support of buildings is prohibited.

(e) Limitations on placement of fill. Subject to the limitations of these regulations, fill shall be designed to be stable under conditions of flooding including rapid rise and rapid drawdown of floodwater, prolonged inundation, and protection against flood-related erosion and scour. In addition to these requirements, when intended to support buildings and structures (Zone A only), fill shall comply with the requirements of the building code. The placement of fill intended to change base flood elevations, change floodway boundaries, or change boundaries of flood hazard areas shown on FIRMs shall be subject to the requirements of Section 6, Subsection (d).

(f) Sewer facilities. All new and replacement sanitary sewer facilities, private sewage treatment plants (including all pumping stations and collector systems) and on-site waste disposal systems shall be designed to minimize or eliminate infiltration of floodwater into the facilities and discharge from the facilities into flood waters, or impairment of the facilities and systems.

(g) Water supply facilities and systems. All new and replacement water supply facilities and systems shall be designed to minimize or eliminate infiltration of floodwater into the systems.

(h) Storm drainage. Storm drainage shall be designed to convey the flow of surface waters to minimize or eliminate damage to persons or property.

(i) Streets and sidewalks. Streets and sidewalks shall be designed to minimize potential for increasing or aggravating flood levels.

(j) Nonstructural fill or alteration of sand dunes in coastal high hazard areas (Zone V/VE). Nonstructural fill or alteration of sand dunes in coastal high hazard areas shall be permitted only when authorized by appropriate federal, Territory or local authorities. Where permitted, such fill or alterations shall comply with the following, as applicable:

- (1) Minor grading and the placement of minor quantities of nonstructural fill with a maximum depth of not more than one (1) foot shall be permitted for landscaping, for drainage purposes under and around buildings, and for support of concrete slabs used for parking, floors of enclosures, landings, decks, walkways, and similar uses.
- (2) Nonstructural fill with finished slopes that are steeper than one unit vertical to five units horizontal shall not be permitted.

- (3) Alteration of sand dunes shall not be permitted.
- (4) Sand dune construction and restoration of sand dunes under or around elevated buildings are permitted when the scale and location of the dune work is consistent with local beach-dune morphology and the vertical clearance is maintained between the top of the sand dune and the lowest horizontal structural member of the building.

(k) Other site improvements in coastal high hazard areas (Zone V/VE). Development and site improvement activities other than buildings and structures, where located in coastal high hazard areas (Zone V/VE), shall not be located under elevated buildings and shall not be structurally attached to buildings. Such site improvements shall be permitted only after the proposed site improvements have received the applicable environment and coastal zone management permits or approvals subject to DPNR and the U.S. Army Corps of Engineers. Such development and site improvement activities include but are not limited to:

- (1) Bulkheads, seawalls, retaining walls, revetments, and similar erosion control structures.
- (2) Solid fences and privacy walls, and fences prone to trapping debris, unless designed and constructed to fail under flood conditions less than the base flood or otherwise function to avoid obstruction of floodwaters.
- (3) On-site sewage treatment and disposal systems, including mound systems.

401 (b) (15) - 13. Manufactured homes

New manufactured homes shall not be permitted in floodways and coastal high hazard areas (Zone V/VE). New and replacement manufactured homes installed in flood hazard areas shall be installed on permanent foundations designed and constructed in conformance with the flood load and flood resistant construction requirements of the building code.

401 (b) (15) - 14. Recreational vehicles

(a) Placement prohibited. The permanent placement of recreational vehicles is prohibited. The temporary placement of recreational vehicles shall not be authorized in coastal high hazard areas and in floodways.

(b) Temporary placement. Recreational vehicles in flood hazard areas shall be placed on a site for less than 180 consecutive days and shall be fully licensed and ready for highway use. Ready for highway use means the recreational vehicles is on wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions, such as rooms, stairs, decks and porches.

401 (b) (15) - 15. Other development and building work

(a) General requirements for other development and building work. All development and building work, including man-made changes to improved or unimproved real estate for which specific provisions are not specified in these regulations or the building code, shall:

- (1) Be located and constructed to minimize flood damage;
- (2) Meet the limitations of Section 6, Subsection (c)(1) when located in a regulated floodway;
- (3) Be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the base flood;
- (4) Be constructed of flood damage-resistant materials; and
- (5) Have mechanical, plumbing, and electrical systems above the base flood elevation or meet the requirements of ASCE 24, except that minimum electric service required to address life safety and electric code requirements is permitted below the base flood elevation provided it conforms to the provisions of the electrical part of building code for wet locations.

(b) Swimming pools. Swimming pools shall be designed and constructed in accordance with ASCE 24. Above-ground swimming pools, on-ground swimming pools, and in-ground swimming pools that involve placement of fill in floodways shall also meet the requirements of Section 6, Subsection (c)(1).

(c) Fences in floodways. Fences in floodways that have the potential to block the passage of floodwater, such as stockade fences and wire mesh fences, shall meet the limitations of Section 6, Subsection (c)(1).

(d) Retaining walls, sidewalks and driveways in floodways. Retaining walls, sidewalks and driveways that involve placement of fill in floodways shall meet the requirements of Section 6, Subsection (c)(1).

(e) Roads and watercourse crossings in floodways. Roads and watercourse crossings that encroach into floodways or riverine waterways with base flood elevations where floodways have not been designated, including roads, bridges, culverts, low-water crossings and similar means for vehicles or pedestrians to travel from one side of a watercourse to the other side, shall meet the limitations of Section 6, Subsection (c). Alteration of a watercourse that is part of work proposed for a road or watercourse crossing shall meet the requirements of Section 6, Subsection (c)(3).

401 (b) (15) - 16. Temporary structures and temporary storage

(a) Temporary structures. Temporary structures shall be erected for a period of less than 180 days. Extensions may be granted by the Floodplain Administrator on a case-by-case basis. Temporary structures shall be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the base flood. Fully enclosed temporary structures shall have flood openings that are in accordance with ASCE 24 to allow for the automatic entry and exit of flood waters.

(b) Temporary storage. Temporary storage includes storage of goods and materials for a period of less than 180 days. Extensions may be granted on a case-by-case basis. Stored materials shall not include hazardous materials.

(c) Floodway encroachment. Temporary structures and temporary storage in floodways shall meet the requirements of Section 6, Subsection (c)(1).